

SOCIO-ECONOMIC

PLANNING SCIENCES

The International Journal of
PUBLIC SECTOR DECISION-MAKING

EDITOR-IN-CHIEF

BARNETT R. PARKER

List of Contents and Author Index
Volume 30, 1996



PERGAMON

Socio-Economic Planning Sciences

The International Journal of Public Sector Decision-Making

Editor-in-Chief

BARNETT R. PARKER, Parker Associates, 113 Derby Lane, Chapel Hill, NC 27514-1412, U.S.A.

Founding Editor

SUMNER N. LEVINE

Editorial Board

ALFRED BLUMSTEIN,
School of Urban and Public Affairs,
Carnegie Mellon University,
Pittsburgh, PA 15213

GERALD GARVEY,
Woodrow Wilson School,
Princeton University,
Princeton, NJ 08540

KENNETH LEE,
Centre for Health Planning and
Management,
University of Keele,
Keele, Staffs. ST5 5BG, England

DUNCAN BOLDY,
Centre for Advanced Studies,
Division of Health Sciences,
Curtin University of Technology,
G.P.O. Box U 1987,
Perth 6001, Western Australia

MICHAEL R. GREENBERG,
Livingston College,
Rutgers University,
New Brunswick, NJ 08903

ARNOLD REISMAN,
Department of Operations Research,
Weatherhead School of Management,
Case Western Reserve University,
Cleveland, OH 44106

WILLIAM W. COOPER,
College and Graduate School of
Business,
University of Texas at Austin,
Austin, TX 78712-1175

ERIC HANUSHEK,
University of Rochester,
W. Allen Wallis Inst. of Political
Economy,
Harkness Hall, Rm 108,
Rochester, NY 14627-0158, U.S.A.

CHARLES REVELLE,
Department of Geography
and Environmental Engineering,
Johns Hopkins University,
313 Armes Hall,
3400 N. Charles Street,
Baltimore, MD 21218-2686

HECTOR CORREA,
Graduate School of Public and
International Affairs,
University of Pittsburgh,
Pittsburgh, PA 15260

LESTER A. HOEL,
Department of Civil Engineering,
University of Virginia, Charlottesville,
VA 22901

THOMAS L. SAATY,
Graduate School of Business,
University of Pittsburgh, Pittsburgh,
PA 15260

ERWIN DIEWERT,
Department of Economics,
University of British Columbia,
Vancouver, BC, Canada V6T 1W5

ANDREW ISSERMAN,
Regional Research Institute,
West Virginia University,
Morgantown, WV 26506

KAORU TONE,
Saitama University,
Graduate School of Policy Science,
Urawa, Saitama, 338 Japan

DONALD ERLKOTTER,
Graduate School of Management,
University of California,
Los Angeles, CA 90024

LEE KOPPELMAN,
2 Dune Court, Setauket, NY 11733

Administrative Editor

EDYTHE A. PARKER,
113 Derby Lane, Chapel Hill,
NC 27514

Copyright © 1996 Elsevier Science Ltd

Publishing Office

Elsevier Science Ltd, Bampfylde Street, Exeter EX1 2AH, England [Tel. Exeter (01392) 51558; Fax (01392) 425370].
Production Editor: Becky Mitchell [e-mail: b.mitchell@elsevier.co.uk].

Subscription and Advertising Offices

North America—Elsevier Science Inc., 660 White Plains Road, Tarrytown, NY 10591-5153, U.S.A. Rest of the World—
Elsevier Science Ltd, The Boulevard, Langford Lane, Kidlington, Oxford OX5 1GB, England [Tel. Oxford (01865) 843000;
Fax (01865) 843010].

Frequency: Published Quarterly in March, June, September and December.

Subscription Rates

Annual Institutional Subscription Rates 1996: North, Central and South America, US\$401.00, Rest of World £252.00.
Associated Personal Subscription Rates are available on request for those whose institutions are library subscribers. Sterling
prices exclude VAT. Non-VAT registered customers in the European Community will be charged the appropriate VAT
in addition to the price listed. Prices include postage and insurance and are subject to change without notice.

Back Issues

Back issues of all previously published volumes are available direct from Elsevier Science Offices (Oxford and New York).
Complete volumes and single issues can be purchased for 1991–1995. Earlier issues are available in high quality
photo-duplicated copies as complete volumes only.

PERIODICALS POSTAGE PAID AT NEWARK, NJ. *Socio-Economic Planning Sciences* (ISSN 0038-0121) is published
4 issues per year March, June, September and December, by Elsevier Science Ltd, The Boulevard, Langford Lane,
Kidlington, Oxford OX5 1GB, U.K. The annual subscription in the U.S.A. is \$401.00. *Socio-Economic Planning Sciences*
is distributed by Mercury Airfreight International Ltd, 10 Camptown Road, Irvington, NJ 07111-1105. POSTMASTER:
Please send address changes to *Socio-Economic Planning Sciences*, c/o Elsevier Science Regional Sales Office, Customer
Support Department, 655 Avenue of the Americas, New York, NY 10010, U.S.A.

List of Contents

NUMBER 1

S. I. Cohen	1	Urban growth and circular flow in a SAM-framework: the case of The Netherlands
Hugh Ellis, Paul L. Ringold and George R. Holdren Jr	15	Emission reductions and ecological response: management models for acid rain control
Aileen B. Rothbard and Arie P. Schinnar	27	Community determinants of psychiatric hospitalization and length of stay
Hsiao-Lin Wang	39	A systematic approach to natural recreational resource management
Marvin B. Mandell and Les R. Becker	51	A model for locating automatic external defibrillators
Joanilio Rodolpho Teixeira and Jorge Thompson Araujo	67	A post-Keynesian model of growth with distributional improvements
<i>About the Authors</i>	77	
<i>Announcement</i>	I	

NUMBER 2

Franco Archibugi	81	Towards a new discipline of planning
Malachy Carey, Ashok Srinivasan and Robert P. Strauss	103	Optimal consolidation of municipalities: an analysis of alternative designs
Joseph R. Oppong	121	Accommodating the rainy season in Third World location-allocation applications
E. Kathleen Adams, Frank W. Porell and James D. Robbins	139	Estimating the utilization impacts of hospital closures through hospital choice models: a comparison of disaggregate and aggregate models
<i>About the Authors</i>	155	
<i>Call for Papers</i>	I	

NUMBER 3

Robert A. Bosch	157	The battle of the burger chains: which is best—Burger King, McDonald's or Wendy's?
V. Sudhir, V. R. Muraleedharan and G. Srinivasan	163	Integrated solid waste management in urban India: a critical operational research framework

Ilham Berrada, Jacques A. Ferland and Philippe Michelon	183	A multi-objective approach to nurse scheduling with both hard and soft constraints
Madhukar G. Angur, Vahid Lotfi and Joseph Sarkis	195	A hybrid conjoint measurement and bi-criteria model for a two group negotiation problem
Thomas A. Lambe	207	Driver choice of parking in the city
Andrew Golub and Bruce D. Johnson	221	The Crack Epidemic: empirical findings support an hypothesized diffusion of innovation process
<i>About the Authors</i>	233	

NUMBER 4

Joseph L. Balintfy, Sarah P. Rook and Shahram Taj	237	The index of decent subsistence
Fahui Wang and Jean-Michel Guldmann	245	Simulating urban population density with a gravity-based model
Celik Parkan	257	Measuring the performance of hotel operations
D. Grady Perdue and Terri L. Stewart	293	Reducing tax receipt volatility in a developing country
James P. Boyle and Theodore J. Thompson	303	Age-test Markov chains for drug testing and detection
<i>About the Authors</i>	315	

